Improving Quality of Care and Workflow by Optimising the Working Conditions. A Case Study From a Danish Nursing Home

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Abstract: Countries in Europe and North America are facing the issue of an increasingly older population in need of quality care in nursing homes, and an increasing shortage of nursing staff. This paper presents a study addressing this issue. Carried out in the Blichergarden Nursing Home in the Municipality of Viborg in Denmark in 2012, the study is based on an analysis of existing aids, carried out by a technician, and assessment data of the patient handling situation from four physiotherapists who observed the transfers of residents in the nursing home for a period of twenty-four hours. The goal was to improve the ergonomic condition without compromising the quality of the care, or increase the overall cost. The implementation, which included the introduction of new aids, and thorough safe patient handling training of staff members, was successful. Sixteen months after the program implementation, the reassessment showed that working conditions had substantially improved. Members of staff were more satisfied since unnecessary or potentially dangerous transfers had substantially decreased. The investment had freed the equivalence of one full-time position. The Viborg Municipality intends to implement the same changes in the fifteen other nursing homes in the area.

Practitioner Summary: The study from the Blichergarden Nursing Home shows that by using the correct working techniques and proper aids, it is possible to improve working conditions and the workflow without compromising quality of care or increasing the overall cost.

Keywords: safe patient handling, patient care, return on investment, nursing home, showering, Mobility Gallery, ErgoCoaches, peer trainers, CEN/ISO TR 12296

1. Background

The Blichergarden Nursing Home is a sixty-bed long-term care facility in the Viborg Municipality of Denmark. Viborg faces the same challenges as most municipalities: an increasing elderly population in need of permanent assistance, and a decreasing number of young people who choose the healthcare profession. This is the situation in Denmark and in the rest of the western world (European Comission 2012), making it a serious issue that needs to be addressed. Having understood the seriousness of the situation, the Viborg Municipality is actively looking for innovative solutions that can improve the working environment in their elderly care organisation. The goal is to improve the quality of care and the working conditions for the staff without increasing the overall cost. Based on this the Viborg Municipality has taken different initiatives for pilot projects that can be implemented in the rest of the organisation. This study describes one of these pilot projects.

2. Aim

The aim of the study was to establish a more efficient and safer process for managing transfers of the residents in the nursing home without increasing the overall cost. The main objectives were to reduce the static load, and to reduce both the number of transfers classified as potentially risky or dangerous, and the number of transfers performed by two members of staff, instead of one.

3. Method

Through observation and evaluation of the transfer techniques in the nursing home, a safe patient handling program was prepared and implemented.
3.1 Data assessment

The baseline data assessment was carried out in two steps. Firstly, a technician went through the available aids in order to establish how old they were and when they were last serviced, among other things. Secondly, four physiotherapists, who had received training in observation technique, spent twenty-four hours at the nursing home, assessing the number and types of transfers performed, the mechanical aids used, and the numbers of staff available per transfer. The residents were classified based on their mobility level, and the transfers were assessed using the NIOSH equation (Waters et al 1993), together with static load analyses of the caregivers’ postures.

The following were assessed:

- Patient mobility level, using the Mobility Gallery™ (Knibbe et al 2012).
- General state of the residents, including weight, gender, age, incontinence issues, pressure ulcer status, and whether they were using compression stockings or not.
- Different kinds of transfers: from sitting to sitting, from lying to sitting in bed, from lying to lying.
- Hygiene procedures, including washing in bed (whole/part of the body), and washing while standing.
- Showering procedures: showering standing, sitting, lying (number per week).
- Bathing (number per week, if at all).

The observers paid special attention to the number of different procedures per week, how many caregivers were involved in the process, and which equipment was used. The equipment used was ceiling lifts, active lifters, sliding sheets and fixed height shower commode chairs.

3.2 Training

The training lasted a full four days, divided into modules of eight half days. The modules were spread over one year, with about six weeks between each module. The sessions entailed basic training in ergonomics and instructions on how to use the aids. Nine members of staff were appointed ErgoCoaches (peer trainers). Offering bedside supervision in concrete transfer and bathing situations, the implementation consultant of the study, together with the ErgoCoaches, visited all residents involved in the project. One visit usually lasted one hour. Altogether nine full days were spent in the nursing home.

3.3 Implementation and follow-up

Based on the results on the assessment, a safe patient handling and mobility program was prepared and implemented, including additional patient handling and hygiene aids, the appointment of ErgoCoaches, staff training and a culture-change program. Based on the assessment of mobility levels, the equipment for safe patient handling use was defined (CEN/ISO TR 12296). Sixteen months after the program implementation a twenty-four-hour reassessment was performed, in exactly the same way as the first assessment was carried out prior to the program start.

4. Result

The baseline assessment identified 64% of the transfers as potentially risky and unhealthy for the staff, of which 74% were located in the hygiene area. The observation pointed to one main gap, from the view of time consumption and ergonomics, which was limited access to ergonomic hygiene equipment for showering. The follow-up after sixteen months showed an 83% reduction of transfers performed in unhealthy way. The total number of transfers was decreased by 39%, and the number of transfers requiring two members of staff was eliminated.
In the first full year, the Blichergarden Nursing Home invested DKK 470,000 (approximately EUR 63,000), including costs for both aids and training. Products were later added at a value of about DKK 100,000 (approximately EUR 13,400), due to the fact that the mobility status of the residents had changed and the need for more aids had increased. The Blichergarden Nursing Home freed resources equivalent to one full-time position in the first year. The most important factor was the improved showering practice, where the number of showering sessions that required two members of staff was eliminated. After the successful pilot study, the Viborg Municipality has decided to implement the same program at the other fifteen nursing homes in the area, with a total of 512 residents.
Fig. 3. The mobility level of the residents changed between the assessments, requiring additional aids.

Fig. 4. The number of transfers performed in an unhealthy way decreased by 83%.
Fig. 5. The number of transfers that required two members of staff was eliminated.

Fig. 6. The total number of transfers decreased by 39%.

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**References**

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